

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : Not Yet Assigned  
First Named Inventor : Thomas BIRKHOFFER  
Filed : Herewith (National Phase of PCT/EP2004/007068)  
TC/A.U. : Not Yet Assigned  
Examiner : Not Yet Assigned

Docket No. : 095309.57223US  
Customer No. : 23911

Title : Drift Compensation for an Impedimetric Exhaust  
Gas Sensor by Variable Bias Voltage

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§ 1.97 AND 1.98

**Mail Stop PCT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, the attached Form PTO-1449 lists documents which the Examiner may deem relevant to patentability of the claims of the above-identified application.

I. Time Period of Submission

This Information Disclosure Statement is submitted:

☒ 1) no later than three months from the application's filing date or 2) before the mailing date of the first Office Action on the merits (whichever is later) or 3) before a first Office Action after the filing of a Request for Continued Examination, and therefore no statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

☐ 2) after the later of three months from the application's filing date and the mailing date of the first Office Action on the merits, but before a Final Office Action, a Notice of Allowance, or an action closing prosecution (*Ex parte Quayle*), (whichever is earlier), and therefore Applicant is filing concurrently herewith:

☐ a Statement under 37 C.F.R. § 1.97(e); or

☐ a fee in the amount of \$180.00 under 37 C.F.R. § 1.17(p).

☐ 3) after either a Final Office Action or a Notice of Allowance, but before payment of the Issue Fee, and therefore Applicant is submitting herewith:

a Statement under 37 C.F.R. § 1.97(e); and

a fee in the amount of \$180.00 under 37 C.F.R. § 1.17(p).

☐ 4) within 30 days of receipt by any individual designated in 37 C.F.R. § 1.56(c) of a communication from a foreign patent office in a counterpart application in which each item of information contained in this information disclosure statement was first cited, and therefore Applicant is submitting herewith:

a Statement under 37 C.F.R. § 1.704(d).

## II. Statement Under 37 C.F.R. § 1.97(e)

☐ I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or

☐ I hereby state that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to my knowledge after making a reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; or

☐ I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement.

## III. Submission of Non-English Language Documents

☒ The following is a concise explanation of relevance of the non-English language documents listed in the attached Form PTO-1449:

☒ The relevance of document AC to the subject matter of the present invention is/are provided in the specification of the above-identified application.

☒ Corresponding foreign or international report(s) citing documents AA, AB and AD-AF, together with an English-language version(s) (if not already in English) of that portion of the report(s) indicating the degree of relevance found by the foreign office(s) is/are submitted.

☒ English language family member publication(s) of document(s) AC-AD is/are noted on Form PTO-1449.

☐ English language abstract(s) is/are submitted for document(s) \_\_\_\_\_.

☐ English translation(s) of the foreign language document(s) \_\_\_\_\_ is/are submitted herewith.

☐ Applicant submits the following explanations:  
\_\_\_\_\_.

#### IV. Continuations/Divisionals/PCT National Stage Applications

☐ Documents \_\_\_\_\_ were of record in parent application Serial No. \_\_\_\_\_, filed \_\_\_\_\_, from which this application claims benefit. As provided in 37 C.F.R. §1.98(d), copies of the documents are not being provided since they were previously submitted to or cited by the United States Patent and Trademark Office in the afore-mentioned parent application.

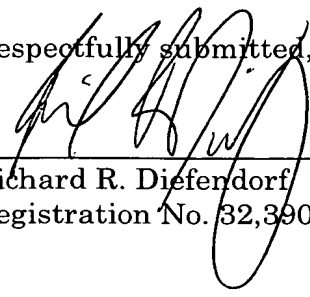
☐ Copies of document(s) listed on the attached form PTO-1449 have already been provided by the International Searching Authority, therefore, duplicate copies are not attached hereto.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

If necessary, this paper should be considered as an authorization to charge Deposit Account 05-1323, Attorney Docket No.: 095309.57223US, for the fee set forth in 37 C.F.R. § 1.17(p).

January 6, 2006

Respectfully submitted,



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Richard R. Diefendorf  
Registration No. 32,390

CROWELL & MORING LLP  
Intellectual Property Group  
P.O. Box 14300  
Washington, DC 20044-4300  
Telephone No.: (202) 624-2500  
Facsimile No.: (202) 628-8844  
RRD:aw

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|--|------------------------|----------------|--------------------------|-----------------------------------|
| Substitute for form 1449A/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(use as many sheets as necessary) |                        |                | <b>Complete if Known</b> |                                   |
|  |                        |                | Application Number       | Not Yet Assigned <b>10/563569</b> |
|  |                        |                | Filing Date              | Herewith                          |
|  |                        |                | First Named Inventor     | Thomas BIRKHOFER                  |
|  |                        |                | Art Unit                 | Not Yet Assigned                  |
| Examiner Name  | Not Yet Assigned       |                |                          |                                   |
| Sheet 1 of 1   | Attorney Docket Number | 095309.57223US |                          |                                   |

| U.S. PATENT DOCUMENTS          |                       |   |                                |  |   |
|--------------------------------|-----------------------|---|--------------------------------|--|---|
| Examiner Initials <sup>1</sup> | Cite No. <sup>1</sup> | Document Number<br>Number-Kind Code <sup>2</sup> (if known) | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                                | AA                    | US- 5,235,267   | 08-10-1993                     | Schoeneberg et al.                                 |   |
|                                | AB                    | US- 2001/0020383  | 09-13-2001                     | Moos et al.  |   |
|                                | US-                   |   |                                |  |   |

| FOREIGN PATENT DOCUMENTS       |                       |  |                                |  |   |                |
|--------------------------------|-----------------------|--|--------------------------------|--|---|----------------|
| Examiner Initials <sup>1</sup> | Cite No. <sup>1</sup> | Foreign Patent Document<br>Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear | T <sup>6</sup> |
|                                | AC                    | DE 39 15 563 C1  | 10-25-1990                     | Schoeneberg et                                     |   |                |
|                                | AD                    | DE 100 11 562 A1   | 09-20-2001                     | Moos et al.  |   |                |
|                                | AE                    | EP 0 426 989 B1  | 05-15-1991                     | Haas et al.  |   |                |

| NON PATENT LITERATURE          |                       |   |                |
|--------------------------------|-----------------------|---|----------------|
| Examiner Initials <sup>1</sup> | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|                                | AD                    | Lechuga et al., "The ammonia sensitivity of Pt/GaAs Schottky barrier diodes," <i>J. Appl. Phys.</i> 70 (6), 15 September 1991, pp. 3348-3354.   |                |
|                                | AE                    | Steimer et al., "Current-Voltage Characteristics of Thin Film SnO <sub>2</sub> Gas Sensors: Electronic Artifacts and Gas Response," <i>Sensors and Materials</i> , Vol. 9, No. 2 (1997) pp. 107-116.  |                |
|                                | AF                    | Hikita et al., "CO Gas Identification by Use of Complex Impedance of pn Heterocontact Comprising of Na-Added CuO and ZnO," <i>Journal of the Ceramic Society of Japan, Int. Edition</i> , Vol. 102, pp. 811-818.  |                |
|                                | AG                    | International Search Report   |                |

|                    |  |                 |  |
|--------------------|--|-----------------|--|
| Examiner Signature |  | Date Considered |  |
|--------------------|--|-----------------|--|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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